

Listing of the Claims

1-7 (Canceled)

1 8. (Currently Amended) A computer implemented best indicator adaptive (BIA) method for
2 demand forecasting comprising the steps, performed by a computer, of:

3 computer-implemented implementing a plurality of forecasting subsystems which make
4 use of indicators Load (L), Ship (S) and Customer Acceptances (CA) history (CA_{hist});

5 computer-implemented generating a forecast (CA_L) from Load (L) by modeling the ratio
6 of quarter-to-date load to quarter CA actual as a random variable with gamma distribution so that
7 the CA becomes a variable with generalized gamma distribution and computing the sample mean
8 and sigma of the quarter-to-date load to quarter CA actual ratio for a final forecasted CA_L
9 demand;

10 computer-implemented generating a forecast (CA_S) from Ship (S) by modeling the ratio
11 of quarter-to-date ship to quarter CA actual as a random variable with gamma distribution so that
12 the CA becomes a variable with generalized gamma distribution and computing the sample mean
13 and sigma of the quarter-to-date ship to quarter CA actual ratio for a final forecasted CA_S
14 demand;

15 computer-implemented generating a forecast (CA_{LS}) from Load and Ship (LS) by
16 forecasting Customer Acceptances (CA) based on Load (L), Ship (S) and Customer Acceptances
17 history (CA_{hist}) to generate CA_{LS} by estimating the functional relationship and the parameters
18 relating the two ratios quarter-to-date load to quarter CA actual and quarter-to-date ship to
19 quarter CA actual;

20 computer-implemented generating a forecast from Customer Acceptances history (CA_{hist});
21 computer-implemented refining the forecasts based on distribution demand using
22 Customer Requested Date (CRAD) by

23 generating a forecast from Load (L) and CRAD as $CA_{L,CRAD}$,

24 generating a forecast from Ship (S) and CRAD as $CA_{S,CRAD}$, and

25 generating a forecast from Load (L) and Ship (S) and CRAD as $CA_{LS,CRAD}$;

26 for each forecast CA_L , CA_S , CA_{LS} , $CA_{L,CRAD}$, $CA_{S,CRAD}$, $CA_{LS,CRAD}$, and CA_{hist} , determining
27 a forecast error;

28 computer-implemented eliminating CA_{LS} and $CA_{LS,CRAD}$ if data is for a historical period
29 shorter than a predetermined period;

30 for all remaining forecasts, selecting the forecast having the forecast error that is the
31 smallest error; and

32 outputting the selected forecast as an optimum forecast.

1 9. (Currently Amended) A computer implemented best indicator adaptive (BIA) method for
2 demand forecasting comprising the steps of:

3 inputting Load (L), Ship (S) and Customer Acceptances (CA) quarterly history (CA_{hist})
4 data into a computer;

5 computer-implemented implementing on the computer a plurality of forecasting
6 subsystems making use of four sources of information, Load (L), Ship (S), Customer
7 Acceptances quarterly history (CA_{hist}), and Customer Request Date (CRAD);

8 computer-implemented forecasting by the computer Customer Acceptances (CA) based
9 on Load (L) to generate CA_L by modeling a ratio of quarter-to-date load to quarter CA actual as a
10 random variable with gamma distribution so that the CA becomes a variable with generalized
11 gamma distribution whose mean and sigma are easily computed from the sample mean and sigma
12 of the quarter-to-date load to quarter CA actual ratio;

13 computer-implemented forecasting by the computer Customer Acceptances (CA) based
14 on Ship (S) to generate CA_S by modeling the ratio of quarter-to-date ship to quarter CA actual as
15 a random variable with gamma distribution so that the CA becomes a variable with generalized
16 gamma distribution whose mean and sigma are easily computed from the sample mean and sigma
17 of the quarter-to-date ship to quarter CA actual ratio;

18 computer-implemented forecasting by the computer Customer Acceptances (CA) based
19 on Load (L), Ship (S) and Customer Acceptances history (CA_{hist}) to generate CA_{LS} by estimating
20 the functional relationship and the parameters relating the two ratios quarter-to-date load to
21 quarter CA actual and quarter-to-date ship to quarter CA actual;

computer-implemented using a log mean to sigma ratio of CRAD distribution, adjusting by the computer, the forecasts CA_L , CA_S and CA_{LS} to arrive at more accurate forecasts $CA_{L,CRAD}$, $CA_{S,CRAD}$, and $CA_{LS,CRAD}$;

computer-implemented for each forecast CA_L , CA_S , CA_{LS} , $CA_{L,CRAD}$, $CA_{S,CRAD}$, $CA_{LS,CRAD}$, and CA_{his} , determining, by the computer, a forecast error;

computer-implemented eliminating, performed by the computer, CA_{LS} and $CA_{LS,CRAD}$ if data is for a historical period shorter than a predetermined period;

eliminating any other forecast due to expert knowledge;

for all remaining forecasts, selecting, by the computer, the forecast having the forecast error that is the smallest error; and

outputting, by the computer, the selected forecast as an optimum forecast.